

# 6550

## Beam Power Tube

### GENERAL DATA

#### Electrical:

Heater Characteristics and Ratings (*Design-Center Values*):

Voltage (AC or DC). . . . . 6.3 ± 0.6 volts

Current at heater volts = 6.3 . . . . . 1.600 amp

Peak heater-cathode voltage:

Heater negative with respect to cathode. . . . . 300<sup>a</sup> max. volts

Heater positive with respect to cathode. . . . . 200<sup>b</sup> max. volts

Direct Interelectrode Capacitances (Approx.):<sup>c</sup>

Grid No.1 to plate. . . . . 0.85 μf

Grid No.1 to cathode & grid No.3, grid No.2, base sleeve, and heater. . . . . 14.0 μf

Plate to cathode & grid No.3, grid No.2, base sleeve, and heater . . . . . 12.0 μf

#### Characteristics, Class A<sub>1</sub> Amplifier:

Triode  
Connection<sup>d</sup>

Plate Voltage . . . . . 250 450 400 volts

Grid-No.2 Voltage . . . . . 250 450 225 volts

Grid-No.1 Voltage . . . . . -14 -46 -16.5 volts

Amplification Factor. . . . . 8 7.5 -

Plate Resistance (Approx.). . . . . 12000 - 27000 ohms

Transconductance. . . . . 11000 - 9000 μmhos

Plate Current . . . . . 140 150 87 ma

Grid-No.2 Current . . . . . 12 - 4 ma

Grid-No.1 Voltage (Approx.)  
for plate ma. = 1 . . . . . -40 - -35 volts

#### Mechanical:

Operating Position. . . . . Any

Type of Cathode . . . . . Coated Unipotential

Maximum Overall Length. . . . . 4-3/4"

Maximum Seated Length . . . . . 4-3/16"

Maximum Diameter. . . . . 2-1/16"

Bulb. . . . . ST16

Base. . . Large-Wafer Octal 8-Pin with Sleeve (JEDEC Group 1, No.B8-86)

Basing Designation for BOTTOM VIEW. . . . . 7S

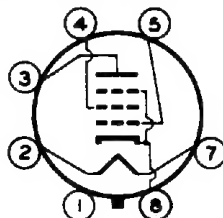
Pin 1 - Base Sleeve

Pin 2 - Heater

Pin 3 - Plate

Pin 4 - Grid No.2

Pin 5 - Grid No.1



Pin 6 - No Internal Connection

Pin 7 - Heater

Pin 8 - Cathode, Grid No.3



RADIO CORPORATION OF AMERICA  
Electron Tube Division  
Harrison, N. J.

DATA 1  
5-62

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## AF POWER AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. . . . .	600 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE. . . . .	400 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value. . . . .	300 max.	volts
Positive-bias value. . . . .	0 max.	volts
CATHODE CURRENT. . . . .	175 max.	ma
GRID-No.2 INPUT. . . . .	6 max.	watts
PLATE DISSIPATION. . . . .	35 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface) . . . . .	250 max.	°C

### Typical Operation and Characteristics:

Plate Voltage. . . . .	250	400	volts
Grid-No.2 Voltage. . . . .	250	225	volts
Grid-No.1 Voltage. . . . .	-14	-16.5	volts
Peak AF Grid-No.1 Voltage. . . . .	14	16.5	volts
Zero-Signal Plate Current. . . . .	140	87	ma
Max.-Signal Plate Current. . . . .	150	105	ma
Zero-Signal Grid-No.2 Current. . . . .	12	4	ma
Max.-Signal Grid-No.2 Current. . . . .	28	18	ma
Plate Resistance (Approx.) . . . . .	12000	27000	ohms
Transconductance . . . . .	11000	9000	μmhos
Load Resistance. . . . .	1500	3000	ohms
Total Harmonic Distortion. . . . .	7	13.5	%
Max.-Signal Power Output . . . . .	12.5	20	watts

### Maximum Circuit Values:

#### Grid-No.1-Circuit Resistance:

For fixed-bias operation . . . . .	0.05 max.	megohm
For cathode-bias operation . . . . .	0.25 max.	megohm

## PUSH-PULL AF POWER AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

Same as for AF POWER AMPLIFIER — Class A<sub>1</sub>

### Typical Operation and Characteristics:

Values are for 2 tubes

	Fixed Bias		Cathode Bias	
Plate Supply Voltage . . . . .	400	600	400	volts
Grid-No.2 Supply Voltage . . . . .	275	300	300	volts
Grid-No.1 Voltage. . . . .	-23	-31	-	volts
Cathode Resistor . . . . .	-	-	140	ohms
Peak AF Grid-No.1-to-Grid-No.1 Voltage. . . . .	46	62	53	volts
Zero-Signal Plate Current. . . . .	180	115	166	ma
Max.-Signal Plate Current. . . . .	270	273	190	ma
Zero-Signal Grid-No.2 Current. . . . .	9	4	7.5	ma
Max.-Signal Grid-No.2 Current. . . . .	44	41	39	ma
Effective Load Resistance (Plate to plate) . . . . .	3500	5000	4500	ohms



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Total Harmonic Distortion. . . . .	3	2.5	4	%
Max.-Signal Power Output . . . . .	55	100	41	watts

## Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation . . . . .	0.05 max.	megohm
For cathode-bias operation . . . . .	0.25 max.	megohm

## PUSH-PULL AF POWER AMPLIFIER — Class A1

*Triode Connection<sup>d</sup>*

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. . . . .	495 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE. . . . .	440 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value. . . . .	330 max.	volts
Positive-bias value. . . . .	0 max.	volts
CATHODE CURRENT. . . . .	192.5 max.	ma
GRID-No.2 INPUT. . . . .	6.6 max.	watts
PLATE DISSIPATION. . . . .	44 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface) . . . . .	250 max.	°C

### Typical Operation and Characteristics:

*Values are for 2 tubes*

Plate Voltage. . . . .	450	volts
Grid No.1 Voltage. . . . .	-46	volts
Peak AF Grid-No.1-to-Grid-No.1-Voltage . .	92	volts
Zero-Signal Plate Current. . . . .	150	ma
Max.-Signal Plate Current. . . . .	220	ma
Effective Load Resistance (Plate to plate) . . . . .	4000	ohms
Total Harmonic Distortion. . . . .	2.5	%
Max.-Signal Power Output . . . . .	28	watts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation . . . . .	0.05 max.	megohm
For cathode-bias operation . . . . .	0.25 max.	megohm

<sup>a</sup> The dc component must not exceed 300 volts.

<sup>b</sup> The dc component must not exceed 100 volts

<sup>c</sup> without external shield.

<sup>d</sup> Grid No.2 connected to plate.

